

# 2013 APCBEES BEIJING CONFERENCES SCHEDULE

2013 3rd International Conference on Chemistry and Chemical Process (ICCCP 2013)  
2013 4th International Conference on Biotechnology and Food Science (ICBFS 2013)  
2013 3rd International Conference on Environment Science and Engineering (ICESE 2013)

**Beijing, China**

**Jinma Hotel Beijing**

**April 21-22, 2013**

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**April 21, 2013 (Sunday)**

## **Jinma Hotel Beijing**

10: 00 – 12: 30	Arrival and Registration
13: 30 – 17: 00	

**Note: (1) You can also register at any time during the conference.**

**(2) The organizer doesn't provide accommodation, and we suggest you make an early reservation.**

**(3) One Excellent Paper will be selected from each oral session. The Certificate for Excellent Papers and will be awarded in the Closing Ceremony on April 22, 2013.**

## **Instructions for Oral Presentations**

### **Devices Provided by the Conference Organizer:**

Laptops (with MS-Office & Adobe Reader)

Projectors & Screen

Laser Sticks

### **Materials Provided by the Presenters:**

PowerPoint or PDF files (Files shall be copied to the Conference Computer at the beginning of each Session)

Duration of each Presentation (Tentatively):

Regular Oral Session: about 10 Minutes of Presentation 5 Minutes of Q&A

Keynote Speech: 30 Minutes of Presentation 5 Minutes of Q&A

### **Conference website and Secretariat Contact:**



ICCCP 2013: [www.icccp.org](http://www.icccp.org)    [icccp@cbees.org](mailto:icccp@cbees.org)

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**Morning, April 22, 2013 (Monday)**

Venue: Room 5

09:00- 09:10	Opening Remarks Prof. Sezai Ercisli Ataturk University Agricultural faculty Dept. Horticulture, Turkey
09:10-09:45	Keynote Speaker I  Prof. Tomasz Ruman Rzeszow University of Technology, Poland "Nanoparticle-based laser mass spectrometry methods"
09:45 – 10:20	Keynote Speaker II  Prof. Sezai Ercisli Ataturk University Agricultural faculty Dept. Horticulture, Turkey "Food properties of mulberries"
10:20-10:50	Taking Photo and Coffee Break

**Morning, April 22, 2013 (Monday)**

SESSION – 1 (ICCCP)

Venue: Room 5

Session Chair: Prof. Tomasz Ruman

Time: 10:50 – 12:10

A00004	Silver $^{109}\text{Ag}$ Nanoparticles for Matrix-less Mass Spectrometry of Nucleosides and Nucleic Bases <b>Joanna Niziol, Tomasz Ruman</b> <i>Abstract</i> —The application of new $^{109}\text{AgNPET}$ nanoparticle surface for analysis of nucleosides and nucleic bases is described along with characterization of $^{109}\text{Ag}$ nanoparticles. The nanoparticles allow laser desorption-ionization mass spectrometry analyses of various low molecular weight (LMW) organic compounds. The new method was used for successful determination of thymidine, 5-fluorouracil, 2'-deoxycytidine, cytidine and 2'-deoxyuridine. The mass determination accuracy was in the 1-3 mDa range which confirms identity of the analyte.
A00008	Electrical Conducting Behavior of W- Doped $\text{VO}_2$ Thin Films / $\text{La}_{0.5}\text{Sr}_{0.5}\text{CoO}_3$ Heterostructure

	<p><b>Chun-Chi Lin, Yi Hu, Jiun-Shing Liu</b></p> <p><i>Abstract</i>—W-doped vanadium oxide thin films were obtained by sol-gel spin coating process on the pre-heat treated silicon wafer. The precursor for thin film coating is prepared with vanadium methanol solution. These films were post annealed at 580 °C for 30 min under controlled air pressure. The average thickness of the films was about 60 nm. The predominant phase of the films is monoclinic VO<sub>2</sub> from Raman spectra analysis. These thin films exhibit a metal-semiconducting transition. The transition temperature was lowered from 68 °C to 34 °C by doping with tungsten cation with 15%W. A heterostructure was made by stacking the VO<sub>2</sub> films on the La<sub>0.5</sub>Sr<sub>0.5</sub>CoO<sub>3</sub> (LSCO) thin films. The LSCO thin film of about 300nm thickness was obtained by r.f. magnetron sputtering deposition process. An apparent rectifying behavior was observed for a p-n junction of VO<sub>2</sub>/La<sub>0.5</sub>Sr<sub>0.5</sub>CoO<sub>3</sub> (LSCO). The reverse bias current is characterized by a reverse threshold voltage of ~4.2V at 40 °C and decrease to ~3V at 80 °C. The rectifying properties show temperature dependence under the metal-semiconducting transition of VO<sub>2</sub>.</p>
A00009	<p>Structural Characterization and Electrical Property of the Manganese Oxides/Silver Nanocomposite Thin films</p> <p><b>Yi Hu, Jiun-Shing Liu, Tung-Cheng Liu</b></p> <p><i>Abstract</i>—The microstructural characterization and electrical properties of the manganese oxides/silver nanocomposite thin films are investigated by the conducting probe atomic force (CP-AFM). The nanocomposite thin films were obtained through electrodeposited by potentiostatic method with silver acetate (AgC<sub>2</sub>H<sub>3</sub>OOH) and potassium permanganate (KMnO<sub>4</sub>) aqueous solution. The morphology for the thin films was examined by atomic force microscopy (AFM), Scanning Electronic Microscopy (SEM) and transmission electron microscopy (TEM). The spherical Ag<sub>2</sub>O nanoparticles of several nanometer are dispersed homogeneously in the thin films and cubic shape Ag nanoparticles of about about 100nm are spreaded on the surface of MnOx thin film. The thickness of the MnOx thin film is about 250nm. The schottky junction between Ag and MnOx with rectifying behavior was evidenced by CP-AFM measurement. The turn-on voltage for the junction is around 0.69V.</p>
A00012	<p>3D-QSAR Study for Checkpoint Kinase 2 Inhibitors through Pharmacophore Hypotheses</p> <p>Yen-Ling Wang, <b>Chun-Yuan Lin</b>, Kuei-Chung Shih, and Chuan-Yi Tang</p> <p><i>Abstract</i>—DNA-damage is induced by ionizing radiation, genotoxic chemicals or collapsed replication forks. To prevent and repair the DNA-damage, mammalian cells will control and stabilize the genome by cell cycle checkpoint. Checkpoint kinase 2 (Chk2) is one of the important kinases that has a great effect on DNA-damage and plays an important role in response to DNA double-strand breaks and related lesions. Hence, in this study, we will concentrate on Chk2 and the purpose is to build the pharmacophore hypotheses (PhModels) by 3D-QSAR study which can identify inhibitors with high biological activities. Ten PhModels were generated by the HypoGen Best algorithm. The established PhModel, Hypo01, was evaluated in the cost function analysis of its correlation coefficient (<i>r</i>), RMS, cost difference, and configuration cost, with the values: 0.955, 1.28, 192.51, and 16.07, respectively. The result of Fischer's cross-validation test for Hypo01 model yielded a 95% confidence level, and the correlation coefficient (<i>r<sub>test</sub></i>) of the testing set yielded a best value of 0.81.</p>
A00013	<p>Surface Graft Polymerization of Acrylamide onto Plasma Activated Nylon Microfiber Artificial Leather for Improving Dyeing Properties</p> <p>Liao Shu-Chuan, <b>Chen Ko-Shao</b>, Chen Wei-Yu and Chou Chin-Yen, Wai kan-chi</p> <p><i>Abstract</i>— To improve surface wettability and dye-ability of Nylon microfiber artificial leather, we apply oxygen plasma treatment and subsequently graft-polymerize acrylamide (AAm) on the surface. The surface properties of AAm-grafted Nylon microfiber artificial leather are characterized by FT-IR,</p>

	<p>SEM, ESCA and dyeing density (C.I.reactive Blue 4). The dyeing rate of AAm-grafted Nylon microfiber artificial leather, up-regulated with higher acrylamide grafting concentration, increases to 67.1 mg/cm<sup>2</sup>, and remains 66.4 mg/cm<sup>2</sup> after rinsed by water, showed better stability than that of control and oxygen plasma modified Nylon microfiber artificial leather. The water-absorptivity of s-graft acrylamide is five times than that of control. From the results, the efficiency and density of dyeing are both improved, indicating that plasma graft polymerization process could contribute to promote the absorption of dye on the artificial leather.</p>
A10001	<p>Science and Technology for Sustainable Development in Indian Scenario  <b>Jaiganesh.V</b> and Nagarajan.P.K.</p> <p><i>Abstract</i>—Exponential Growth of Technology in India has played a significant role in all round development and growth of economy in our country. Sustainable development is an emerging area, because it addresses the socio economic development of every human being. India has opted for a judicious mix of indigenous and imported technology. Purchase of technology is commonly called “Technology transfer” and it is generally covered by a technology transfer agreement. This work focuses on the key areas of sustainable developments and scientific contributions towards it. This write-up almost identifies the critical issues or problems associated with sustainable development. Identifying the problems and giving the necessary recommendations for solving the problems encountered. The development of any country is almost depends on the advancement in developing the technology in different fields. The revolution takes place between eighteenth and nineteenth centuries makes a world to think differently in the science and technology steam engines, textile, printing etc. Countries that take part across this industrial revolution are developed much more than other countries because the machine occupies the work more from men. Further advancements in twentieth century in space, aircraft, computers, biotech and information technology are boost the developed nations much advanced. The new technology with young minds creates a synergy both in knowledge and resource utilization.</p>
A10002	<p>Proficiency Testing on Total Dietary Fiber in Wheat Flour  Teresita R. Portugal, <b>Ma. Rachel V. Parcon</b>, Mildred A. Udarbe</p> <p><i>Abstract</i> — Proficiency Testing Schemes are used to assess a laboratory’s ability to perform tests competently to ensure generation of valid and reliable analytical data thus, assuring global competitiveness of local food products. Regular participation in these schemes enables laboratories to compare their results with those of other laboratories, and support their application for ISO/IEC 17025 accreditation or renewal. A scheme on total dietary fiber in wheat flour was organized by the Food and Nutrition Research Institute, Department of Science and Technology, following international standards, in response to these needs. A wheat flour proficiency testing material for total dietary fiber analysis was prepared and distributed for analysis of twenty-two local and foreign food testing laboratories that participated in the study. z-scores were computed to evaluate their performance. Participants reported a wide variation of results, with the standard uncertainty of the consensus value (<math>u_x</math>), from the participants’ results, which was used as the assigned value, being quite high. The z-scores obtained thus, are provided “for information only”. Of the participants, 72.7% recorded “satisfactory” performance. The developed wheat flour reference material, with assigned values and range of “satisfactory” results, has been stored for use in method validation and internal quality control work by the local food testing laboratories. This proficiency test provided an informative tool in assessing laboratory performance on total dietary fiber analysis, conducting preliminary or exploratory investigative and corrective action on “unsatisfactory” results to improve performance, and initially building confidence/credibility of local participant laboratories.</p>
A10003	Synthesis of Tricyclic nucleoside analogue of methyl-2'-deoxyguanosine

	<p><b>Kabir Abdu</b> and David M. Williams</p> <p><i>Abstract</i>—Alkylation at the O6-position of guanine leads to one of the most significant mutagenic lesions in DNA, O<sup>6</sup>-alkylguanine. The human protein O<sup>6</sup>-methylguanine-DNA methyltransferase (MGMT) repairs these lesions by transferring the alkyl group to an active site cysteine in an irreversible manner. The levels of MGMT are often higher in tumour cells which reduce the effectiveness of many chemotherapeutic agents that alkylate DNA. This has led to the development of inactivators of this protein for use in chemotherapy. To learn more about the repair mechanism carried out by MGMT, a high resolution MGMT-DNA structure is required which may enable the design of new inhibitors to improve current cancer treatments.</p> <p>Here we described the synthesis of 4-amino-2-(2'-deoxy-β-D-erythro-pentofuranosyl)-6-oxa-7, 8, 9-trihydro-2, 3, 5-triazabenzotriazolo [cd] azulene (2), a tricyclic nucleoside analogue of O<sup>6</sup>-methyl-2'-deoxyguanosine.</p>
A30002	<p>The Influence of Fermented Feed to the Exterior and Interior Quality of Pegagan Duck Eggs</p> <p><b>Sofia Sandi</b>, Miksusanti, Elisahara Dan Fitri Nova Liya Lubis</p> <p><i>Abstract</i>—The aims of this research was to find out the influence of complete feed based on fermented local ingredients to the exterior and interior quality of pegagan duck eggs. Complete feed based on fermented local ingredients (C.F.B.F.L) with commercial feed was mixed every weeks in accordance with the level of treatment. Feeds were arranged with protein content (18%) and metabolism energy (2900 kcal/kg) in accordance with recommendations of NRC. As many as sixty pegagan duck aged 4 months were used in the study. Completely random design was used in this research, with 5 treatments and 4 replicates. Each of these repeats were placed 3 ducks and kept for 3 months. The treatment consisted of R0 (100% commercial feed), R1 (25% C.F.B.F.L + 75% commercial feed), R3 (50% C.F.B.F.L + 50% commercial feed), R4 (75% C.F.B.F.L + 25% commercial feed), R5 (100% C.F.B.F.L). The results showed that the giving of complete feed based on fermented local ingredients effected the value of egg index, yolk egg score, thickness of eggshell, and wholeness and cleanliness of eggs. It was concluded that the increasing level of giving complete feed based on fermented local ingredients, the higher value of egg index and yolk egg score, but the thickness of eggshell was getting lower.</p>

12:20 – 13:30

Lunch

### Afternoon, April 22, 2013 (Monday)

SESSION – 2 (ICBFS)

Venue: Room 5

Session Chair: Ahmed Ali

Time: 13:30 – 15:30

S001	<p>Abattoir-Based Survey and Histopathological Findings of Lumpy Skin Disease in Cattle at Ismailia Abattoir</p> <p><b>Ali Meawad Ahmed</b> and Amina A. Dessouki</p> <p><i>Abstract</i>—A cross-sectional study on Lumpy Skin Disease (LSD) was conducted at Ismailia Abattoir, Egypt for determining the prevalence of LSD in cattle. The results showed that summer represented the highest season for slaughtering of the cattle (5468 animal) followed by autumn (4367) then spring (3421),</p>
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	<p>and winter (2988). Out of 10055 slaughtered cattle, 101 male (1.0%) and 14 female (0.1%) that presented lesions diagnosed as specific LSD lesions. There was statistically difference (<math>P&gt;0.05</math>) in prevalence of LSD in cattle between seasons. LSD could not be reported in buffaloes or calves. The highest prevalence of LSD in male cattle was observed in autumn 53 (2.01%) followed by winter 30 (1.7%), summer 18 (0.5%). Similarly, the highest prevalence of LSD in female cattle was observed in autumn 7 (0.3%) followed by winter 5 (0.2%), summer 2 (0.1%). Histopathological examination of the suspected samples revealed presence of ballooning degeneration and intracytoplasmic inclusion bodies characteristic of LSD. The estimated annual loss from condemn carcasses was 13770 Egyptian Pound. In conclusion, abattoir records showed a wide spectrum data concerning LSD occurring in traditional livestock herds. In order to overcome the economic loss, it should be development of effective vaccines derived from the original.</p>
S008	<p>Effect of prolonged treatment with melengestrol acetate (MGA) on the persistence or non-persistence of ovarian follicles in ewes</p> <p><b>Guillermo Salas-Razo</b>, Jesús Antonio Rojo-Martínez, Rogelio Garcidueñas-Piña, Juan Pablo Flores-Padilla, Mauricio Perea-Peña and Jose Luis Espinoza-Villavicencio</p> <p><i>Abstract</i>—The aim of this study was to evaluate whether prolonged treatment with acetate of melengestrol (MGA) influence or not, the ovarian follicular persistence in the ewe. We used 20 ewes with BCS <math>3.2 \pm 0.3</math> (scale 1-5), <math>40.18 \pm 5.8</math> kg BW and <math>3.25 \pm 0.6</math> old years. All were confirmed by ultrasound, not pregnant. Treatment consisted of 0.22 mg of MGA daily during 17 days and follicular development was observed. The follicles were identified as an echogenic structures. The persistence or not follicular persistence was determined from changes in the size of dominant follicles in the days observed. During treatment, none of the ewes presented the dominant follicle persistent development. Is concluded that administration of prolonged treatment with MGA, not generates persistent follicle development in ewes.</p>
S010	<p>Acute oral toxicity effects of Momordica charantia in sprague dawley rats</p> <p><b>R. Nurul-Husna</b>, A. Noriham, H. Nooraain, A. H. Azizah, O. Farah Amna</p> <p><i>Abstract</i>—Momordica charantia is commonly known as bitter gourd, balsam pear or karela is a multi-purpose herb. It is cultivated from different parts of the world and is usually used in traditional medicine. This study was conducted to investigate the acute oral toxicity effects of Momordica charantia in Sprague Dawley rats based on OECD Guidelines 423. The extract was administered orally at two different doses of 300 mg/kg and 2000 mg/kg of body weight. The toxicity signs were recorded within the first 24 hours after forced feeding. Both of the treated groups showed dizziness and depression during the first 30 minutes. However, no significant difference of feeding patterns which included water, food intake and body weight gain were observed. Haematological evaluations did not show significant differences in white blood cells count (WBC), mean corpuscular volume (MCV) and mean corpuscular haemoglobin concentration (MCHC) levels. However, red blood cells count (RBC) and packed cell volume (PCV) percentage was significantly lower in rats that received 2000 mg/kg than those of the other two groups. Meanwhile, haemoglobin (Hb) count and the relative liver weight of rats received 2000 mg/kg body weight of extract decreased significantly (<math>p&lt;0.05</math>) as compared with the control group. Thus, this study is expected to be beneficial for clinical and traditional applications for safe consumption and to utilize Momordica charantia as a remedy at a recommended dosage.</p>
S011	<p>Acute and oral subacute toxicity study of ethanolic extract of Cosmos caudatus leaf in Sprague Dawley rats</p> <p><b>O. Farah Amna</b>, H. Nooraain, A. Noriham, A.H. Azizah, and R. Nurul Husna</p> <p><i>Abstract</i>—Cosmos caudatus, commonly known as ‘Ulam Raja’ by the locals, belongs to the botanical family Asteraceae. The plant is traditionally used in Malaysia for many beneficial claims such as for reducing body heat, as an anti-aging agent, improving blood circulation, promoting fresh breath,</p>

	<p>strengthening bone marrow and treating infections associated with pathogenic microorganisms. This study investigated the acute and subacute toxicity effects of <i>C. caudatus</i>, as per OECD Guidelines 423 for acute and 407 for subacute protocols. Haematological assessments as well as the body and organs weights of the rats were measured. For acute toxicity study, no evidence of toxicity attributable to the treatment was observed on behavioural pattern, haematological evaluation and organ weight in both treated and control groups. A significant weight gained (<math>p &lt; 0.05</math>) in rats that received 5000 mg/kg extract was observed, however, gross examination of internal organs revealed no detectable inflammation. For subacute toxicity study, there was a significant increased (<math>p &lt; 0.05</math>) in water intake (ml/day) in 250 and 500 mg/kg treated groups as compared with control while food intake and weight gain are comparable in all groups. A significant decreased (<math>p &lt; 0.05</math>) of lung and liver weights was observed in all treated groups while kidney weight of rats treated with 500 mg/kg of extract decreased significantly as compared with control. Haematological evaluation showed no significant difference except for packed cell volume (PCV) that decreased significantly (<math>p &lt; 0.05</math>) among the treated groups. In addition, red blood cells (RBC) of both groups of rats that received 250 and 500 mg/kg decreased significantly (<math>p &lt; 0.05</math>) as compared to the control group. Meanwhile, white blood cells (WBC) and mean corpuscular haemoglobin concentration (MCHC) were significantly different (<math>p &lt; 0.05</math>) among those rats that received 125 and 500 mg/kg extracts, respectively, as compared with control. The finding therefore revealed that different concentrations of the extract had induced different toxicity effects among the rats especially on subacute toxicity study. It is recommended that a comprehensive study to be conducted to ascertain the toxicity effects of <i>C. caudatus</i> on other biological parameters.</p>
S016	<p>Dietary <i>Hibiscus taiwanensis</i> Exerts Hypoglycemic in Streptozotocin- Induced Diabetic Rats  <b>Chia-Hsin Huang</b>, Shu-Mei Tsai, Yi-Ru Chen, Ming-Ying Wu, and Juei-Tang Cheng</p> <p><i>Abstract</i>—The antihyperglycemic effect of <i>Hibiscus taiwanensis</i> (HT), was investigated in streptozotocin-induced diabetic rats (STZ-diabetic rats) showing type-1 like diabetes mellitus. A glucose uptake test showed that HT exhibits an increase of glucose uptake activity in a concentration-related manner. HT was isolated a purified biological active compound- syringaldehyde (1). Moreover, an effect by SYR was shown for insulin sensitivity in STZ-diabetic rats. The compound was found to increase insulin sensitivity in STZ-diabetic rats. These results suggest that HT can increase glucose utilization and insulin sensitivity to lower plasma glucose in diabetic rats.</p>
S017	<p>Efficient removal of unctuous wastes from wastewater  <b>Ágnes Kis</b>, Krisztián Laczi, Andrea Hajdú, Árpád Szilágyi, Gábor Rákhely and Katalin Perei</p> <p><i>Abstract</i>—Nowadays, food industrial unctuous wastes represent a serious problem in industrial wastewater treatment processes. As a consequence of their hydrophobic characters, their emission results in dramatic environmental and economical effects. Unctuous materials, depositing in the pipelines, block the waste flow, furthermore reduce the efficacy of the wastewater treatment. However, bioremediation processes - using microorganisms to degrade these hazardous materials - can provide a solution for this problem. Several rhodococci are able to assimilate many hydrophobic materials converting them into biomass and CO<sub>2</sub>. These bacteria use surfactants for making these hydrophobic materials suitable for aqueous bioconversion processes. Additionally, surfactant producing bacteria are capable to decompose many types of hydrocarbons present in diesel oil or dead oils, as well. Rhodococci also have monooxygenase enzymes capable to catalyze the oxidation of numerous hazardous hydrocarbons. Moreover, these strains might harbor lipase enzymes as well, which might help in the degradation of unctuous wastes, such as pig lard or poultry fat.</p> <p>In this study, our aim was to demonstrate the qualitative ability of <i>Rhodococcus</i> sp. strain to degrade unctuous wastes released by food industry and domestic activity. The strain shows high similarity in its</p>



	<p>physiology to the <i>R. erythropolis</i> PR4 (NBRC 100887), but apparently of their surfactants are different. Nevertheless, this <i>Rhodococcus</i> sp. MK1 strain was able to use pig lard and poultry fat as sole carbon sources in minimal medium.</p>
S028	<p><i>Acalypha wilkesiana</i> ethyl acetate extract enhances the in vitro cytotoxic effects of <math>\alpha</math>-tocopherol in human brain and lung cancer cells</p> <p><b>Su Wen Lim</b>, Hwei San Loh, Kang Nee Ting, Tracey D Bradshaw and Nazariah Zeenathul</p> <p><i>Abstract</i>—Multi-combinatorial approaches are considered nowadays to enhance the effectiveness of cancer treatment. In this study, <math>\alpha</math>-tocopherol was tested in combination with the ethyl acetate extract from <i>Acalypha wilkesiana</i> for cytotoxicity activity against U87MG and A549 cell lines. The GI50 values for <math>\alpha</math>-tocopherol against U87MG and A549 cells were <math>0.923 \pm 0.411 \mu\text{g/ml}</math> and <math>5.290 \pm 1.952 \mu\text{g/ml}</math> respectively in cell viability tests; when <i>A. wilkesiana</i> extract was added in adjunct with the treatment of <math>\alpha</math>-tocopherol in minimum inhibitory concentration (MIC), the GI50 values of <math>\alpha</math>-tocopherol improved significantly (<math>p &lt; 0.05</math>) to <math>&lt; 0.43 \mu\text{g/ml}</math> (<math>1 \mu\text{M}</math>) for both cell lines tested. Histological staining signified that both <math>\alpha</math>-tocopherol and <i>A. wilkesiana</i> extract treated cancer cell lines exhibited apoptotic morphological characteristics. Single cell gel electrophoresis (SCGE) comet assays revealed that <math>\alpha</math>-tocopherol caused only double strand DNA breaks; whereas <i>A. wilkesiana</i> extract caused both single strand and double strand DNA breaks in U87MG and A549 cells. It is proposed that <math>\alpha</math>-tocopherol and <i>A. wilkesiana</i> extract might trigger apoptosis in both U87MG and A549 cells through different apoptotic pathways that might complement each other to enhance their antiproliferative efficacy against the cancer cells.</p>
S030	<p>Bovine STAT5A gene polymorphism analysis and its association with milk composition traits in Jersey cows</p> <p><b>Maria Selvaggi</b>, Vincenzo Tufarelli, Francesco Pinto, Gerardo Centoducati, Angela Dambrosio, Maria Pia Santacroce and Cataldo Dario</p> <p><i>Abstract</i>—In mammals, the STAT proteins (signal transducers and activators of transcription) are a family of cytoplasmic transcription factors mediating the actions of many peptide hormones and cytokines within target cells. In particular, STAT5A is a crucial mediator in the lactogenic hormone response being a candidate marker for milk traits in farm animals. In the present paper, the T→C nucleotide polymorphism at position 12743 in exon 16 of the bovine STAT5A gene was analyzed with PCR-RFLP in a sample of Jersey cows. The purposes of this investigation were to determine the frequencies of the variant alleles and the genotypes of this SNP in Jersey cows and to verify its association with some milk production traits. All the three possible genotypes were identified in the studied population. The observed frequencies of C and T alleles were 0.147 and 0.853 respectively. The TT genotype was the most frequent followed by TC and CC ones. No significant differences between the TT and TC genotypes were found considering MY, FY PC and PY. On the other side, the difference concerning the fat content of milk produced by cows belonging to TC and TT groups was found significant at the statistical analysis: in particular, milk from TT animals had a higher fat content in comparison with that of TC ones (4.55 vs. 4.14%, respectively; <math>P &lt; 0.05</math>). However it may be necessary to carry out further investigations about this SNP to better clarify its role on milk production traits in cattle.</p>
S035	<p>Follicular dynamic in ewes during melengestrol acetate (MGA) treatment</p> <p><b>Guillermo Salas-Razo</b>, Jesús Antonio Rojo-Martínez, Ernestina Gutiérrez-Vázquez, Aureliano Juárez-Caratachea, Rogelio Garcidueñas-Piña and Jose Luis Espinoza-Villavicencio</p> <p><i>Abstract</i>—The aim of this study was to evaluate the follicular dynamics in ewes during a prolonged treatment with melengestrol acetate (MGA). Twenty non-pregnant ewes with <math>3.2 \pm 0.3</math> BCS (scale 1-5), <math>40.18 \pm 5.8</math> kg BW, and <math>3.25 \pm 0.6</math> years old were supplemented daily with 0.22 mg of MGA for 17 days, and observed their follicular development. The follicles were identified as an echogenic structures. The</p>

	<p>two largest follicles observed were identified, monitored and measured daily until they reach its maximum size (<math>&gt; 5</math> mm) and their consequent follicular atresia at the end of each wave. The most of the ewes (85%) treated with MGA showed three follicular waves and the remaining 15% only show two waves. None of the ewes was observed ovulating during the period of treatment. The diameter of dominant ovulatory follicles observed had a variation from <math>5.5 \pm 0.8</math> to <math>6.6 \pm 0.5</math> mm. The duration of follicular waves was similar to those reported else. It's concluded that using this doses of MGA is suppressed the ovulation without effect on the follicular dynamics in ewes, allowing normal development of dominant follicles and the manifestation of ovulatory follicular waves.</p>
S037	<p>Rapid method for detection of Anisakidae larvae in marine fishes Gaetano Vitale Celano, Antonello Paparella, Armida Fransvea, Claudia Balzaretta, <b>Giuseppe Celano</b></p> <p><i>Abstract</i>—A rapid and sensitive detection method is proposed to evaluate the presence and vitality degree of Anisakidae larvae in marine fishes by UV diaphanoscopy. 923 fish samples belonging to seven fish species (<i>Merluccius merluccius</i>, <i>Molva elongata</i>, <i>Sardina pilchardus</i>, <i>Scomber scomber</i>, <i>Triglia lucerna</i>, <i>Engraulis encrasicolus</i>, and <i>Trachurus trachurus</i>) were evaluated for the presence of Anisakidae larvae by using direct observation, peptic digestion, and UV transillumination. The results obtained indicate that UV transillumination can be considered a rapid and accurate tool for routine analysis of marine fishes even under field condition.</p>
S10007	<p>Antibacterial and Antioxidant of Uwi (<i>Dioscorea alata</i> L) Starch Edible Film Incorporated with Ginger Essential oil <b>Miksusanti</b>, Herlina, Masril K.I</p> <p><i>Abstract</i>—It has been done the testing of antibacterial and antioxidant activity of edible film which incorporated with ginger essential oil. Antibacterial activity testing has been done by disk method. An Antioxidant activity test has performed with a spectrophotometric method using DPPH as a radical source. The result of the research showed that ginger essential oil has antibacterial activity against <i>Escherichia coli</i>. The best antibacterial activity of edible film was at 3% essential oil with inhibitor zone 0.5 cm. The best antioxidant occurs in 3% essential oil with 31.50 percent reduction of DPPH. An Edible films containing 3% essential oil has the tensile strength is 24.96 kPa and elongation percent is 20% and 0.3 mm of film thickness. The edible film can produce antibacterial and antioxidant properties of the optimum by the addition of 3% essential oil.</p>
S20001	<p>Molecular identification of a newwheat-Thinopyrumintermediumcryptictranslocation line for resistance topowdery mildew <b>Hai-Xian Zhan</b>, Guang-Rong Li, Zhi-JianChang, and Ju-Qing Jia,</p> <p><i>Abstract</i>—Powdery mildewis one of the destructive diseases of wheat in many regions of the world.Wheat-ThinopyrumintermediumderivedlineCH5382conferring novel powdery mildew resistance was characterized using molecular and cytogenetic methods. The conventional GISH analysis probed by Th. intermediumcannot detect the alien fragmentof CH5382. Two PCR-based Landmark Unique Gene markers (TNAC1102 and TNAC1567), which were assigned on wheat chromosome 2L and 5S, respectively, canamplfy unique bands of CH5382, and the bands were traced to wheat-Th. intermedium partial amphiploiddonor TAI7044 and Th. intermedium. The result suggested that CH5382 is a new wheat-Thinopyrumintermedium cryptic alien translocation line with powdery mildew resistance.</p>
S30005	<p>The construction of recombinant D6 clone for in vitro breast cancer study <b>Tan Wee Yee</b>, Khoo Boon Yin and Chew Ai Lan</p> <p><i>Abstract</i>—D6, which is also known as CCBP 2, is one of the decoy chemokine receptors. It was recently found to play a role in the progression of breast cancer cells. In this study, the existence of D6 in invasive breast cancer cells, MDA-MB-231 was investigated by One-step RT-PCR with additional Pfu DNA</p>

polymerase in the reaction. The amplicons were then sequenced and compared with the reference sequence from GenBank database. Nucleotide sequence analysis showed that the amplicon sequence matches the reference sequence. Thus, it is confirmed that full length D6 sequence had been amplified from MDA-MB-231.

### Afternoon, April 22, 2013 (Monday)

SESSION – 3 (ICESE)

Venue: Room 8&9

Session Chair: Ya-Feng ZHOU

Time: 13:30 – 15:30

T004	<p>Do Environmental Norms and Climate Change Perceptions Influence Mitigation Behaviour?: Thailand as a Case Study</p> <p><b>Suthirat Kittipongvises</b> and Takashi Mino</p> <p><i>Abstract</i>—Global climate change is now widely recognised as one of the most significant environmental threats of the 21st century. The need to reduce its impact requires the sharing of responsibilities between organising authorities and the local public. It is widely acknowledged that, to date, the current state of scientific knowledge on climate change is objective. This could lead to it being more or less directly translated into actions. This study aims to investigate which factors are motivating people to undertake mitigation measures, with a particular focus on environmental norms and climate change perceptions held by the rural citizens of Thailand. Questionnaires were distributed to 253 selected households in village 4 of Nongbuasala, Nakhon Ratchasima province, Thailand. Statistical analysis indicated that there was a significantly positive correlation between environmental norms and climate change perception (<math>r = .383</math>, <math>p &lt; 0.01</math>). Both perception of climate change as a phenomenon and concern for the environment were found to be significantly positive correlated with the behavioural intention to take voluntary mitigation actions (<math>p \leq 0.05</math>). Specifically, only the intentions to implement afforestation and reduce plastic consumption were significantly positive correlations with the perceptions of climate change. And beside this, the willingness to eliminate the use of plastic, increase waste stream recycling and implement afforestation activities ought to be positively related to environmental norms held by the respondents (<math>r = .325</math> to <math>r = .058</math>; <math>p \leq 0.05</math>). Implications for further research were finally raised.</p>
T008	<p>Response of Different Strains of <i>Enterococcus faecalis</i> to UV Inactivation after Freezing</p> <p><b>W. Gao</b> and A. Williams</p> <p><i>Abstract</i>—Response of two strains of <i>Enterococcus faecalis</i> bacteria, ATCC strain 29212 and ATCC strain 51299 (vancomycin resistant) to UV inactivation after survived freezing treatment was examined. The test microorganisms were frozen at <math>-7</math> °C, <math>-15</math> °C or <math>-30</math> °C with one, three or five freeze and thaw cycles prior to UV irradiation to investigate the effect of freezing temperature and freeze thaw cycles on the efficacy of UV inactivation. Experimental results suggest that freezing influenced the response of <i>Enterococcus faecalis</i> cells to UV irradiation. Freezing treated cells behaved differently compared to those had not frozen.</p>
T009	<p>Study on Characteristics of Leakage Accident of Hazardous Chemicals and Their Rescue</p> <p><b>Quanmin Bu</b>, Weining Cai, Xing Tong</p> <p><i>Abstract</i>—Leakage accident of hazardous chemicals is a urgent task for fire forces in emergency rescue. Analysis on characteristic and law of leakage accident and finding out its impact on emergency rescue is a pressing matter, they have important significance in both theory and practice.</p>
T010	<p>Simulation of stream flow for Upper Lam Takongsub-watershed using SWAT model</p>

	<p><b>NetnapaPongpetch</b> and PongthepSuwanwaree</p> <p><i>Abstract</i>— Watershed is considered to be the idea unit for water management. The Soil and Water Assessment Tool (SWAT) interfaced with ArcGIS 9.3 software (ArcSWAT2009) was selected for stream flow estimation from Upper Lam Takong, a part of the Moolbasin, in Northeastern region of Thailand. This sub-watershed has a total area of 581 km<sup>2</sup>. The model was calibrated for the year 2007-2008 and validated with observed stream flow for the year 2009. Then the model performance was evaluated using statistical and graphical methods to assess model simulation capability for the study area. The Nash-Sutcliffe model efficiency (NSE) coefficient and the regression correlation coefficient (R<sup>2</sup>) for monthly stream flow were obtained as 0.85 and 0.86 for calibration period and 0.63 and 0.92 for validation period, which showed that SWAT model can be a useful tool for water resource management in Upper Lam Takong and the bigger Lam Takong watershed.</p>
T012	<p>Analysis of Access to Clean Development Mechanism Landfill Projects through a Multi-Agent Model</p> <p><b>Silvia Cruz</b>, Sônia Paulino</p> <p><i>Abstract</i>— This paper analyzes Clean Development Mechanism (CDM) landfill projects, with emphasis on stakeholder access to the implementation and results from the projects developed in the Bandeirantes and São João landfills, both located in the city of São Paulo, Brazil. The analysis is based on a multi-agent model. It was concluded that, in the landfills studied, there is no effective information flow or coordination with the different community stakeholders whose participation is limited to public meetings held to discuss the allocation of revenues derived from the sale of carbon credits.</p>
T015	<p>Climate Change and Groundwater: Vulnerability, Adaptation and Mitigation Opportunities in India</p> <p><b>Khajuria Anupam</b> and Kanae Shinjiro</p> <p><i>Abstract</i>—Climate change is one of the most important global environmental challenges, with implications for food production, water supply, health, energy, etc. Addressing climate change requires a good scientific understanding as well as coordinated action at national and global level. During the last 40 years, India has witnessed a decline in gravity-flow irrigation and the rise of a booming ‘water-scavenging’ irrigation economy through millions of small and private tube wells. The groundwater has become at once critical and threatened. Climate change will act as a force multiplier; it will enhance groundwater’s criticality for drought-proofing agriculture and simultaneously multiply the threat to the resource. India’s groundwater hotspots are western and peninsular regions. These regions are critical for climate change mitigation as well as adaptation. To achieve both, India needs to make a transition from surface storage to ‘managed aquifer storage’ as the centre pin of its water strategy with proactive demand- and supply-side management components.</p>
T019	<p>Transport, Energy Conservation and Energy Efficiency in Buildings Explored as Situations of Opportunity for City Transformation</p> <p><b>Aleh Kliatsko</b></p> <p><i>Abstract</i>—This paper presents methodological developments and findings from the on-going research project entitled Situations of Opportunity in the Growth and Change of three Stockholm City Districts, called SitCit for short. In this project a future studies approach is used to create scenarios of more sustainable Stockholm City Districts (Bromma, Rinkeby, Södermalm) formulated as an overall 60% reduction in energy use in private transports, residential multifamily buildings and citizens’ everyday life by the year 2060. Increased energy efficiency energy usage systems (EUS’s) and conservation of services and functions will lead to reduced dependency on fossil fuels and lower CO<sub>2</sub> emissions. In order to evaluate these two specific goals are set for the project: the average primary energy usage (power) per capita should not exceed 2kW per person and the CO<sub>2</sub> emissions per capita should not exceed 1 ton per year.</p>

	The paper <i>describes</i> issues of energy use as consequence of human activities in cities and especially situation where the opportunities for change are significant.
T023	<p>Assessment of groundwater potential risk by agricultural activities, in North Italy  <b>Ye Zhao, Marina De Maio and Enrico Suozzi</b></p> <p><i>Abstract</i>—The goal of this study was to use GIS technology to develop maps of relative groundwater risk from agriculture activity in Vercelli plain. SINTACS will be connected with a IPA Meanwhile, agricultural chemical compounds concentration, compiled from domestic wells throughout the study area will be use to calibration the index model. SINTACS model was used to determine the instinct vulnerability of the groundwater shows that most of the Vercelli plain’s groundwater is at high to very high risk in terms of pollution potential. Sensitivity analysis was employed to figure out the acutely importance of the single data layer.</p>
T030	<p>On a Field Investigation and Open Data Analysis to Identify Diffusion Sources of Radioactive Substance  <b>Kazunari Ishida</b></p> <p><i>Abstract</i>— After the Fukushima No. 1 nuclear power plant disaster due to the huge earthquake, spreading contamination is a serious fear for Japanese society. In this paper, a field investigation is described to understand the contamination in the west part of Japan, which is in a region approximately a thousand km from the east power plant. Based on the contamination origin found in the investigation, open data is analyzed to identify important factors for spreading radioactive substance in terms of relationship between air dose rate and weather conditions. Based on the analysis, a detection rule or algorithm for the contamination origin is summarized to develop a detection system for radiation warning. Air dose rate is observed on each public monitoring point. The nearest weather observation station for each public monitoring point concerning air dose rate is also identified to analyze the relationship between air dose rate and weather conditions.</p> <p>According to the analysis, rainfall is an effective trigger to drop radioactive substance, such as contaminated airborne particles, to the ground. However, long-term rainfall, e.g., over half of a day, also has an effect to clean the air and ground. The most serious factor is wind direction from spreading origins of the particles in terms of air dose rate. In addition, consistent wind from a spreading origin can bring the particles without rainfall. On the other hand, wind speed seems not to be a big factor of increase of air dose rate, although the speed could multiply the effect of wind consistency on a spike of the dose rate.</p>
T038	<p>Quantification of Waste in Conventional Construction  <b>Siti Akhtar Mahayuddin and Wan Akmal Zahri Wan Zaharuddin</b></p> <p><i>Abstract</i>—Construction waste is generated throughout the construction process such as during site clearance, material use, material damage, material non-use, excess procurement and human error. The exact quantity and composition of construction waste generated throughout the projects are difficult to be identified as they are keep on changing due to the dynamic nature of the construction activities. Different stages of construction generates different types and composition of waste. Therefore the trend of waste generated throughout the construction stages need to be identified. This paper will critically review literature on construction waste in order to understand the nature of waste generation from construction activities. Based on the literature studied, this paper propose a method to quantify waste for conventional construction. The proposed method comprises four steps. First is identification of construction stages and expected waste generated. Second is selection of construction sites with similar characteristics for uniform investigation. Third is sorting and weighing of mixed waste collected in a dumpster. The last step is summation of the recorded quantity. It is expected that the proposed method should be practical and suits current situation of Malaysian construction projects and support the agenda of National Strategic Plan for Solid Waste Management.</p>

T040	<p>Method on Conversion of Gasoline to Biogas Fueled Single Cylinder of Four Stroke Engine of Electric Generator</p> <p><b>Tjokorda Gde Tirta Nindhia</b>, I Wayan Surata, I Ketut Adi Atmika, Dewa Ngakan Ketut Putra Negara, Ari Wardana</p> <p><i>Abstract</i>—The Gasoline fueled single cylinder generator engine are well established and available in the market with reasonable price, in the other hand the biogas fueled engine for electric generator is not well established yet in the market. The biogas energy is easy to produce therefore the price for the biogas is very much cheaper than the gasoline. The purpose of this research is to find conversion method from gasoline to biogas fuelled of the single cylinder four stroke engine of electric generator. For this purpose the biogas should be upgraded to the level of zero impurities of hydrogen sulfide H<sub>2</sub>S, water (H<sub>2</sub>O) and reducing up to zero level of CO<sub>2</sub> impurities. The carburetor of the gasoline engine was replaced and only component of the mixer of the fuel and air were used. The intake of the biogas fueled should be completed with valve that can be opened automatically by vacuum of the suction stroke of the engine and compression ration of the engine should be increased until reach 9:1 of compression ratio. With this conversion method, the engine of the electric generator used for this research is run well and possible to reach maximum capacity that can be achieved by using gasoline previously.</p>

15: 30 - 15: 50

Coffee Break

### Afternoon, April 22, 2013 (Monday)

SESSION – 4 (ICBFS)

Venue: Room 5

Session Chair: Maria Selvaggi

Time: 15:50 – 18:00

S012	<p>Effects of Enzymatic Interesterification on The Physicochemical, Polymorphism and Textural Properties of Palm Stearin, Palm Kernel Oil and Soybean Oil Blends</p> <p><b>Siti Hazirah Mohamad Fauzi</b>, Norizzah Abd Rashid and Zaliha Omar</p> <p><i>Abstract</i>—This study evaluated the effects of enzymatic interesterification (EIE) using Lipozyme TL IM on palm stearin (PS), palm kernel oil (PKO), soybean oil (SBO) and their constituent blends formulated according to a Design Expert 8.0.4 (2010). Slip melting point (SMP), solid fat content (SFC), triacylglycerol composition (TAG), polymorphism and textural properties were investigated. Palm-based trans-free table margarine containing ternary mixtures of PS/PKO/SBO [50/22/28 (w/w)], was optimally formulated through analysis of multiple isosolid diagrams and was found to have quite similar SMP and SFC profile as compared to the commercial table margarine. This study has shown EIE is effective in modifying the physicochemical properties of the PS, PKO and SBO blends.</p>
S015	<p>Properties of Tilapia Bone Powder and Its Calcium Bioavailability Based on Transglutaminase Assay</p> <p><b>Bung-Orn Hemung</b></p> <p><i>Abstract</i>—This paper was about the properties of tilapia (<i>Oreochromis niloticus</i>) bone powder and the bioavailability of its calcium based on the transglutaminase assay by the following procedures: Firstly, tilapia frames were soaked in 0.8 N NaOH at 90 °C for 1 h. The bone residues were autoclaved at 121 °C, 350 g.cm<sup>-2</sup> for 60 min before drying/grinding to obtain the tilapia bone powder. Moisture, crude fat, and protein contents of the powder were found 2.46 ± 0.03, 5.82 ± 0.04, and 14.81 ± 0.33 %, respectively. The</p>

	<p>highest component was the ash content, which was found to be <math>75.83 \pm 0.12</math> %. The color values were 98.08, 16.79, and 79.46 for L, a, and b values, respectively. Secondly, the solubility of tilapia bone powder was tested at the ratio of powder:water of 1:4 and the value was found <math>9.38 \pm 0.07</math>%. Thirdly, soluble ash was determined to obtain the Ca<sup>2+</sup> content and found to be 116.56 mg.L<sup>-1</sup> as assessed by inductively coupled plasma mass spectrometry. At last, the tissue transglutaminase (tTGase) assay was introduced to analyze for the bioavailability of soluble Ca<sup>2+</sup>. This reaction is based on the requirement of Ca<sup>2+</sup> for full activation of tTGase. Soluble Ca<sup>2+</sup> (162 nM) could activate the crude tilapia tTGase (0.42 mg) to catalyze the incorporation of monodansylcadaverine (MDC) for 11.28 nmole into dimethylated casein (2 mg) at 37°C within 10 min. An increase in MDC incorporation was observed when Ca<sup>2+</sup> in the reaction was increased.</p>
S021	<p>Antioxidant Activities of <i>Syzygium cumini</i> and <i>Ardisia elliptica</i> in Relation to Their Estimated Phenolic Compositions and Chromatic Properties  <b>Siti-Azima Abdul Muttalib</b>, Noriham Abdullah and Nurhuda Manshoor</p> <p><i>Abstract</i>—Plant extract serves as a good source of bioactive compounds and also natural pigment which is potential to be further applied as colourants in food and pharmaceutical products. The aim of this study is to determine antioxidant activities in <i>Syzygium cumini</i> and <i>Ardisia elliptica</i> based on FRAP, ORAC, DPPH and ABTS radical scavenging assays in relation to their total phenolic content (TPC), total flavonoids content (TFC) and anthocyanin content (tAcy). The chromatic properties based on colour density (CD), Lightness (L*), hue angle (ho) and chroma value (c) of the selected plants were also determined to evaluate their potential as natural colourants in food. <i>Syzygium cumini</i> showed higher in FRAP value (25.66 mM TEAC), DPPH radical scavenging capacity (EC<sub>50</sub>=0.22 mg/ml) and TPC (43.64 mg GAE /g) as compared to <i>Ardisia elliptica</i> with 19.60 mM TEAC, EC<sub>50</sub>=0.24 mg/ml and 41.75 mg GAE /g respectively. <i>Ardisia elliptica</i> exhibited higher in ABTS scavenging activity (4.63 mM TEAC), ORAC value (10.95 μM TEAC), TFC (36.91 mg QE /g) and tAcy (9.97 mg cyanidin / g) as compared to <i>Syzygium cumini</i> with 4.30 mM TEAC, 10.12 μM TEAC, 17.02 mg QE /g and 8.71 mg cyanidin /g respectively. <i>Ardisia elliptica</i> showed higher in CD (1.32 AU), c (32.29) and ho values (24.68o) but lower in L* value (50.69) as compared to the <i>Syzygium cumini</i> with 1.01 AU, 12.10, 10.02o and 75.49 respectively. FRAP, ABTS and EC<sub>50</sub> values exhibited very strong correlation with TFC (r<sub>2</sub>= 0.974, 0.984, 0.921 respectively) and tAcy (r<sub>2</sub>= 0.953, 0.998, 0.947 respectively). They also exhibited strong correlation with TPC (r<sub>2</sub>= 0.854, 0.779, 0.749 respectively). ORAC assay exhibited weak correlation with TFC (r<sub>2</sub>= 0.357) and tAcy (r<sub>2</sub>= 0.229) but strong correlation with TPC (r<sub>2</sub>=0.713). Hence, it can be concluded that, TFC and tAcy exhibited very strong relationship with the FRAP, ABTS and DPPH scavenging activities and work as single electron transfer in their mechanism while <i>Ardisia elliptica</i> was better in their chromatic properties as compared to <i>Syzygium cumini</i>.</p>
S022	<p>Quantification of Polyphenolic Acids and Antioxidant Capacity of Palm Puree from Different Tenera Breed  <b>Haswani Maisarah Mustafa</b>, Noriham Abdullah and Zainon Md Noor</p> <p><i>Abstract</i>—In this study, two Tenera breeds were used in the preparation of Palm Puree (PP), namely T24 and T99. Each breed was formulated with two different PP formulations which made of 2% mesocarp fibre with 98% crude palm oil (labeled as A) and 5% mesocarp fiber with 95% crude palm oil (labeled as B). The four formulations were named as PP24A, PP24B, PP99A and PP99B. Total phenolic content (TPC), total flavonoid content (TFC) and antioxidant capacity of four Palm Puree formulations were determined using spectrophotometric methods. Identification and quantification of individual polyphenolic acid compounds were performed using reversed phase high performance liquid chromatography. TPC of all samples varied from 486.33 to 778.29 mg GAE/100 g EW. The amount of TFC ranged between 30.08 and 52.01 mg CE/100 g EW. The FRAP value varied from 585.58 to 1234.06 mM TE/g EW. While for the</p>

	<p>IC50 ranged between 100.24 and 156.38 <math>\mu\text{g/ml}</math>. A strong correlation was found between the TPC and the antioxidant capacity, indicating that polyphenolic acid would be responsible in scavenging the free radicals. Syringic acid was found to be the most predominant phenolic acid in all formulations.</p>
S024	<p><b>Quantitative Analysis of Total Soluble Solids and Titratable Acidity of Sweet Tamarind by SW-NIRS</b>  <b>Sineenart Suktanarak</b> and Sontisuk Teerachaichayut</p> <p><i>Abstract</i>—Quality of sweet tamarind ('Prakaytong' variety) must be acceptable as customer needs. Total soluble solids (TSS) and titratable acidity (TA) are important indexes for consideration of quality. Short wavelength near infrared spectroscopy (SW-NIRS) in transmittance mode ranged 665-955 nm was investigated to use for detection of total soluble solids and titratable acidity in sweet tamarind. A set of 209 samples (137 samples for a calibration set and 72 samples for a prediction set) was used for total soluble solids determination. A set of 163 samples (104 samples for a calibration set and 59 samples for a prediction set) was used for titratable acidity determination. Partial least squares regression (PLSR) was used to develop the calibration models. Smoothing (Savitsky–Golay) spectral pretreatment obtained good results of a calibration model for total soluble solids (<math>R=0.90</math>, <math>RMSEC=1.71</math>) and obtained accuracy for screening in the prediction set (<math>R=0.86</math>, <math>RMSEP=1.91</math>). Smoothing (Savitsky–Golay) combined with first derivative spectral pretreatment obtained accepted results for the calibration model for titratable acidity (<math>R=0.87</math>, <math>RMSEC=0.29</math>) and obtained accuracy for screening in the prediction set (<math>R=0.83</math>, <math>RMSEP=0.33</math>). All results indicated that it is possible to use SW-NIRS for nondestructive prediction of total soluble solids and titratable acidity in sweet tamarind.</p>
S025	<p><b>Characteristic of Ghee Obtained from Different Post-clarification Temperatures</b>  <b>Niwa Suwarat</b> and Wanna Tungjaroenchai</p> <p><i>Abstract</i>—Physical and chemical characteristics of ghee produced from a direct cream method with different post-clarification heating temperatures and times were studied. Fresh cream from buffalo's milk was inoculated with freeze dried mixed cultures of <i>Lactococcus lactis</i> subsp. <i>lactis</i>, <i>Lactococcus lactis</i> subsp. <i>cremoris</i>, <i>Lactococcus lactis</i> subsp. <i>lactis</i> biovar <i>diacetylactis</i> and <i>Leuconostoc mesenteroides</i> subsp. <i>cremoris</i>, and incubated at <math>32 \pm 0.5</math> °C for 4 hr. Fermented cream samples were heated to render butter oil (ghee), and post-clarification heatings were conducted at temperatures of <math>100 \pm 5</math>, <math>110 \pm 5</math>, or <math>120 \pm 5</math> °C, for 5, 10, or 15 min, respectively. Free fatty acid values (FFA) and oxidative stability in hours significantly increased (<math>P &lt; 0.05</math>). With increasing temperature and prolonged periods of time. The oxidative stability values increased from <math>15.45 \pm 0.17</math> to <math>28.60 \pm 0.34</math> h., while FFA values increased from <math>0.22 \pm 0.12</math> to <math>0.36 \pm 0.03\%</math> (expressed as oleic acid). Changes in moisture content of ghee samples were not affected (<math>P &gt; 0.05</math>) by post-clarification heatings. Both temperature and time of post-clarification effected changes in L, a, and b values. Values of lightness (L) ranged <math>100.95 \pm 0.07</math> to <math>94.91 \pm 0.05</math>, yellow (b) ranged <math>23.17 \pm 0.05</math> to <math>48.32 \pm 0.07</math>, and green (a) ranged <math>-6.46 \pm 0.02</math> to <math>-7.44 \pm 0.03</math>, respectively.</p>
S031	<p><b>Amount of Fat Absorbed of Non-stored and Stored Potatoes After Frying and Roasting</b>  <b>Ruta Galoburda</b>, Irisa Murniece and Daina Karklina</p> <p><i>Abstract</i>—In potato processing the common cooking methods are frying and roasting. During frying several chemical and physical changes take place, including oil and water interaction which is related to the heat-mass transfer phenomena wherefrom the nutritional quality of the product is changed. The aim of the research was to evaluate oil absorption by roasted and fried potatoes. Oil absorption and water loss of five common Latvian potato varieties Lenora, Brasla, Imanta, Zile and Madara was evaluated A two-year research was conducted during two periods: just after harvesting and after six months of storage. Three commonly used cooking methods were applied: deep fat frying, shallow frying and roasting in oven. Time-temperature was controlled. Fat content in fried potatoes in 100 g of DW by the types of frying differs significantly (<math>p &lt; 0.001</math>). A close linear correlation was found between the fat content and moisture</p>



	(R <sup>2</sup> =0.815).
S032	<p>Risk Assessment of Acrylamide Intake from Deep-fat Fried Potatoes in Latvia</p> <p><b>Irisa Murniece</b>, Daina Karklina, Ruta Galoburda and Dace Santare</p> <p><i>Abstract</i>—Consumption of fried potatoes in Latvia is the highest compared to Nordic and the other two Baltic countries. Therefore acrylamide intake from fried potatoes in the population might be high as well. The aim of the research was to analyse the risk assessment of acrylamide intake from deep-fat fried potatoes in Latvia. Five common Latvian potato varieties were selected: Lenora, Brasla, Imanta, Zile and Madara. A two-year research was conducted during two periods: just after harvesting and after six months of storage. Acrylamide was extracted from potatoes by solid phase extraction and the acrylamide content was determined by LC-MS/MS. Acrylamide content significantly differs (<math>p &lt; 0.05</math>) in potatoes by variety and by time. A male takes up 1.9 times more acrylamide from French fries than an adult female.</p>
S20004	<p>Moisture adsorption isotherms of Orthosiphon stamineus leaves</p> <p><b>Sriyana Abdullah</b>, Ibni Hajar Rukunudin, Abd Razak Shaari and Muhammad Syarhabil Ahmad</p> <p><i>Abstract</i>—A herb, Orthosiphon stamineus is a popular traditional medicine for centuries to treat many human illness especially diseases of urinary tract and kidney stones. Moisture adsorption study of O. stamineus leaves is important because this herb is stored and consumed in its dried form. The behavior of dried leaves under different conditions during storage can have an impact on the final quality of end product. In this research, moisture adsorption isotherms were developed at 2 different temperatures of 5 oC and at ambient (30 oC) and at 6 levels of relative humidity (RH) ranging from 11.3 % to 98.5 % by using the static gravimetric method. Microbial growth on the samples were also observed. The moisture adsorption of O. stamineus was found to be of type III isotherm (J-shaped). The equilibrium moisture content (EMC) is higher at low temperature compared to the higher temperature at all RH levels. For example, at RH level of 98.5 % the EMC is 0.58 g water/g dry matter (dry basis- d.b) and 0.48 g water/g dry matter (d.b) at 5 oC and 30 oC respectively. Microbial growth was observed to present for samples at RH more than 75 % as early as day 6th of experiment at ambient temperature (30 oC) whereas for samples at 5 oC microbial growth was observed to present at RH of 98.5 % after 54 days of experiment.</p>
S20007	<p>Optimization of Hydrocolloids and Maltodextrin Addition on Roselle-based Leather using 2-level full factorial design</p> <p><b>Siti Nadiyah Shafi'i</b>, Noorlaila Ahmad, Mohd Zahid Abidin, Norziah Mohd Hani, Normah Ismail</p> <p><i>Abstract</i>—Texture of fruit leather is important and its quality will be affected by different types of hydrocolloid used. In this work, based on statistical designs, a two-level full factorial design was employed to analyse the extensibility of roselle-based fruit leather with the additional of hydrocolloids (0 - 0.5%) and maltodextrin (1 - 5%). The extensibility of fruit leather was measured using tensile grip (A/TG) by TA.XT2i® Texture Analyzer. The influences of four potential independent variables, namely carrageenan (A), xanthan gum (B), locust bean gum (C) and maltodextrin (D) were examined. According to half normal plot analysis, the results showed that xanthan gum, maltodextrin and locust bean gum significantly contributed towards the extensibility of fruit leather with the values of 56.0%, 19.5% and 5.6%, respectively. A near optimum composition for the extensibility of roselle-based fruit leather is as follows; carrageenan, 0.1%; xanthan gum, 0.3%; locust bean gum; 0.3%; and maltodextrin, 1.0%.</p>
S20009	<p>Analyzing of Major Active Components in Vernonia cinerea</p> <p>Chiao-Song Wu ,<b>Guan-rui Lai</b></p> <p><i>Abstract</i>—This study investigates the extraction of the Vernonia cinerea using supercritical carbon dioxide extraction under the following conditions pressure at 300, 400 and 500 bar, temperatures at 313, 323 and 333 K, CO<sub>2</sub> flow rate at 2 and 3 L/min. The best operation of extraction is under 500 bar, 333 K and 3 L/min CO<sub>2</sub> flow rate. The reverse-phase high performance liquid chromatography method was</p>

	<p>developed for determining major active components of <i>Vernonia cinerea</i>. We dissolve the sample with methanol and analyzed by using a MetaChem C18-A(250×4.6m, 5μ) column with a gradient elution composed of ultra-pure water and acetonitrile. The wavelength of UV detector was set at 280 nm and the flow-rate was set at 1 mL/min. Under this condition, the ingredients of <i>Vernonia cinerea</i> can be detected.</p>
S038	<p>Increasing of Nitrogenous Substances in Wort Using Commercial Enzyme and Modifying Mashing Method</p> <p>Pailin Pliansrithong Pliansrithong, <b>Ulaiwan Usansa</b> and Chokchai Wanapu</p> <p><i>Abstract</i>— Rice used as adjunct is limited because the relative lower soluble nitrogen compare with that of barely will dilute total nitrogenous substances in wort and beer. Therefore, modification of mashing method and Neutrase® addition were proposed to increase rice/barley malt ratio. Total protein contents of four rice cultivars determined by Kjeldahl method were in a range of 6.53-7.49% (w/w). Amount of Neutrase® and mashing time for increasing protein were determined by mashing at 52 °C and found that increasing of mashing time increased soluble nitrogen and Free Alpha Amino Nitrogen (FAN) in wort more than 30% and 70%, respectively. The proper mashing time was 60 min and the appropriate amount of Neutrase® was 400 μl per 50 g rice. In addition, activation of Termamyl SC® at 95°C for 20 min also influenced more solubilized protein in rice cooking step. Afterward, the appropriate mashing program was evaluated in various rice/barley malt ratios. The qualified wort contained at least 150 mg/L FAN were obtained from wort used rice up to 80% and had satisfied fermentation performance. Therefore, Neutrase® addition plus modification mashing method could be one solution for increasing rice/barley malt ratio.</p>
S30003	<p>The Potential of Malolactic Fermentation on Organic Acids Degradation in Mao (<i>Antidesma thwaitesianum</i> Müell.) Wine Production</p> <p><b>Wanphen Jitjaroen</b>, Tunyaluk Bouphun, Lachinee Panjai</p> <p><i>Abstract</i>—Commercial mao wines often show highly acidic level which results in a sourness taste of the products. Thus, the purpose of the study was to present the ability of malolactic fermentation in the reduction of acidity during mao wine production. The must was mixed with puree and adjusted to 3.7 g/L total acidity, 200 g/L sugar content, 0.6 mg/L thiamine hydrochloride, sulphited to a level of 50 mg/L, and fermented at 20 oC. The addition of three different industrial yeast strains, and ammonium phosphate levels (DAP): Rhone2323 with DAP 300, and 500 mg/L, and GHM with DAP 500 mg/L were prepared, and incubated at 20 oC until the end of alcoholic fermentation. Consequently, the commercial malolactic bacteria Elios1 was added until fermentation reached the end of the attenuation stage. The enological parameters were investigated to control a well-fermentation. Results showed that the malolactic fermentation affected the degradation of most organic acids in particular with malic acid from 1.34-1.76 g/L to nil, accompanying with the increase of lactic acid from 0.02-0.35 to 0.77-0.85 g/L, and slightly increase of a pH from 3.0 to 3.1-3.2. Overall acidity can be reduced in the range of 0.87 to 1.05 g/L.</p>
S30012	<p>Food Fermentation</p> <p><b>Hilal Yıldız</b> and Sezai Ercisli</p> <p><i>Abstract</i>—The history of food fermentation is lost in antiquity. After drying, fermentation is the oldest food preservation method. Fermentation became popular with the dawn of civilization because it not only preserved food but also gave it a variety of tastes, forms, and other sensory sensations. Fermentation plays different roles in food processing. Major roles are preservation of food through formation of inhibitory metabolites, improving food safety through inhibition of pathogens and improving the nutritional value. The success of using microorganisms for fermentation lies in their very microscopic and metabolic characteristics. They are high surface area to volume ratio. Microorganisms are very tiny creatures. Taking an example of a rod bacterium, we can see that it has six free surfaces that surround the bacterium. These six free surfaces interfaced with the surrounding environment from where they obtained their nutrients or</p>

	to where they throw away their metabolic waste products. With such a high number of free surface areas in a tiny volume of cell, it confers upon the bacterial cell a very high surface area to volume ratio. This very high surface area to volume ratio allows maximum or optimum surfaces for diffusions or molecular exchanges to occur between the microbial cell and the environment. No matter where the molecules are, they are easily accessible for diffusion into the microbial cell. This review attempts to give an overview of the taxonomy of the microorganisms used in food fermentations and history of fermentation.

### Afternoon, April 22, 2013 (Monday)

SESSION – 5 (ICESE)

Venue: Room 8&9

Session Chair: Tjokorda Gde Tirta NINDHIA

Time: 15:50 – 18:00

T045	<p>Compaction Characteristics of Lateritic Soil- Stabilized Municipal Solid Waste Bottom Sediment  <b>A. Y. Abdulfatah, S. G. Kiru and T. A. Adedokun</b></p> <p><i>Abstract</i>-An investigation has been made into the compaction characteristics of Lateritic Soil-Stabilized Municipal Solid Waste (MSW) Bottom Sediment. In particular, work has been directed towards determining to what extent the results of the British Standard Compaction Test for Lateritic Soils are affected by MSW Bottom Sediments. The bottom sediments of MSW from some selected dumping sites in Kano metropolis Nigeria were mixed with lateritic soils in different proportions and a compaction test was conducted on the mixtures. Maximum dry densities (MDD) of the mixtures were found to range between 1.600 and 1.700 Mg.m<sup>-3</sup> and optimum moisture contents (OMC) were between 12% and 17%. The results are similar to those of Silty Clay Soils of MDD between 1.600 and 1.845 Mg.m<sup>-3</sup> and OMC between 15% and 25%. It is recommended that the bottom sediments be used as landfill or road construction materials after sorting out the re-cycled materials.</p>
T046	<p>Concept for Eritrea's Sustainable Economic Development Red Sea, the Natural Dam of Eritrea  <b>Hossana Solomon</b></p> <p><i>Abstract</i>-The Danakil Depression is located in Eritrea, a few kilometers inland from the Red Sea coast and sinks 120 meters below sea level. This concept paper attempts to explore Eritrea's ability to develop a hydroelectric and potable water generation capacity from the Red Sea. Unlike many countries with access to seas and oceans, Eritrea is endowed with a natural hydro dam because of its geographical location and topography. The Red Sea can be used as a resource for the production of energy as hydro dam and potable water source through desalination. The availability of cheap, clean and environmentally safe energy and water sources will enable the country to eliminate poverty and stop environmental degradation, thus contributing to reduce or minimize the global warming problem.</p>
T050	<p>Automatic Multi-objective Calibration of a Rainfall Runoff Model for the Fitzroy Basin, Queensland, Australia  <b>Md. Sharif Imam Ibne Amir, Mohammad Masud Kamal Khan, Mohammad Golam Rasul, Raj H Sharma, Fatema Akram</b></p> <p><i>Abstract</i>— This paper presents a large scale hydrological model for the Fitzroy Basin using the MIKE 11 NAM modelling system. This model simulates the rainfall runoff processes for the three different and interrelated storages which are surface storage, root zone storage and groundwater storage. The parameters of such model cannot be obtained directly from measurable quantities of catchment characteristics. Hence model</p>

	<p>calibration is required to get the model parameters. Manual calibration is very time consuming and it only focuses on a single objective function. Thus tradeoff exists between the different objectives. For this study, an automatic calibration was done considering the four multiple objectives and obtained the optimal values of the model parameters for each catchment. The simulated and observed discharge hydrographs show a reasonable good match for each sub-catchment. Moreover model reliability was evaluated using the statistical methods Index of Agreement (IA) and Efficiency Index (EI). The IA and EI obtained 0.821-0.951 and 0.849-0.961 for different sub-catchments.</p>
T051	<p>Numerical Modelling for the Extreme Flood Event in the Fitzroy Basin, Queensland, Australia  <b>Md. Sharif Imam Ibne Amir</b>, Mohammad Masud Kamal Khan, Mohammad Golam Rasul, Raj H Sharma, Fatema Akram</p> <p><i>Abstract</i>— Fitzroy Basin is the second largest catchment that drains to the coast in Australia. Fitzroy Basin is capable of producing severe flooding from tropical cyclone with heavy rainfall due its immense size and fan-like shape. Analysis shows that the historical peaks of different tributaries in different sub-basins of the Fitzroy River occurred in different years and their contributions are different for each flood event. However a scenario might happen when the flood peaks of different tributaries would synchronize and its consequence will be mass devastation indeed. The impact of combination of extreme flood peaks of different tributaries in different sub-basins to the total flood magnitude of the Fitzroy river is presented in this study using an integrated hydrological and hydrodynamic model. The discharge found from the synchronized extreme flood event was about 36% higher than the most severe historical flood that occurred in 1918.</p>
T10003	<p>Policy Design and Implementation Issues of Regulating Greenhouse Gas Emissions in China  <b>Xiangsheng Dou</b>, Jingjing Xie, and Zenglong Ye</p> <p><i>Abstract</i>—The basic policy tools to regulate greenhouse gas emissions are the carbon taxes and the carbon emissions right trading. In theory, they have equivalents in the efficiency and effectiveness of carbon emissions reduction. However, due to the uncertainty of real world, so they no longer have theoretical equivalent, but difference. Therefore, it is necessary on the basis of the reality of socio-economic development and changes to choice and implement the most effective policy instruments. In the selection and design of specific policies, the diversification, stability and dynamic adjustment of policy objectives, the balance and coordination between international policies, as well as the interaction and coordination between different polices, should fully be considered.</p>
T20008	<p>Alterations of Acetylcholinesterase Activity and Antioxidant Capacity of Zebrafish Brain and Muscle Exposed to Sublethal Level of Cadmium.  <b>Abeer Ghazie A. Al-Sawafi</b> and Yunjun Yan</p> <p><i>Abstract</i>— Water pollutants have a high potential risk for the population health. Protection from toxic impacts of water contaminants includes understanding the mechanism of low level toxicity and possible biological effect on people's health. Cd is one kind of conventional water contaminants which necessary to assess their potential negative effects. Zebrefish ( <i>Danio rerio</i> ) is often used as animal model in bioassessment. In this study, the fish was respectively exposed to <math>1/15_{th}</math> (<math>0.636 \text{ mg L}^{-1}</math>), <math>1/10_{th}</math> (<math>0.954 \text{ mg L}^{-1}</math>) and <math>1/5_{th}</math> (<math>1.908 \text{ mg L}^{-1}</math>) of the <math>LC_{50}</math> value, and the treatment was set for 5, 10, 15, 20 and 25 days. A decrease in biomarkers of AChE activity with dose and time-dependent manner and significantly increased in activities of antioxidant enzymes catalase (CAT) and superoxide dismutase (SOD) in the brain and muscle of the fish when exposure to Cd. Then, the treatment was reduced the amount of protein content. This indicates that sublethal concentration treatment of Cd can cause changes at various levels, such as inducing alterations in the enzyme engaging in the control of cholinergic transmission, arising antioxidant competence and reducing protein content of the different tissues, which suggests low-level Cd contaminant may bring serious potential health risk.</p>
T20010	<p>A comparison of water treatment sludge and red mud as adsorbents of heavy metals and their capacity for</p>

	<p>desorption and regeneration</p> <p><b>Ya-Feng ZHOU</b> and Richard J. HAYNES</p> <p><i>Abstract</i>— The adsorption of As(III), As(V), Se(IV) and Se(VI) by salt water neutralized red mud and alum water treatment sludge was investigated and compared using the batch adsorption technique. For water treatment sludge, adsorption of As(V), Se(IV) and Se(VI), at equimolar concentrations of added metalloid, declined with increasing pH. The decline was rapid above pH 4.0 for Se(VI), above pH 5.0 for Se(IV) and above pH 6.0 for As(V). Adsorption of As(III) increased with increasing pH up to pH 9.0 and then declined. For red mud, adsorption of As(V), Se(IV) and Se(VI) showed a maximum at about pH 5.0 and for As(III) adsorption remained relatively constant over the pH range 2.0-10.0 after which it declined. Red mud showed less than 25% adsorption of added Se(VI) and As(III) over the entire pH range tested (2.0-12.0) and reached 50% or more for As(V) only over the pH range 4.0-6.9 and for Se(IV) between pH 4.3 and 5.6. At pH 5.0, adsorption of As(III) and Se(IV) was better described by the Langmuir than Freundlich equation but the reverse was the case for As(V) and Se(VI). Kinetic data for adsorption of all four oxyanions onto both adsorbents correlated well with a pseudo-second order kinetic model suggesting the process involved was chemisorption. NaOH was more effective at removing adsorbed metalloids from both adsorbents than HNO<sub>3</sub>. Water treatment sludge maintained its As(III) and Se(IV) adsorption capability at greater than 70% of that added over eight successive cycles of adsorption/regeneration using 0.5 M NaOH as a regenerating agent. By contrast, for red mud, As(V) adsorption capacity declined very rapidly after three adsorption/desorption cycles and that for Se(IV) it decreased progressively with increasing numbers of cycles. It was concluded that water treatment sludge is a suitable material to develop as a low cost adsorbent for removal of heavy metal oxyanions from wastewater streams.</p>
T30001	<p>Cu- and Cd -induced Cytotoxicity Involving Lipid Peroxidation and Sulfhydryl Compounds in the Hyperaccumulator and Nonaccumulator Varieties of <i>Commelina Communis</i></p> <p><b>Haiou Wang</b></p> <p><i>Abstract</i>—The ability to accumulate Cu and Cd was investigated in Cu hyperaccumulator and nonaccumulator varieties of <i>Commelina communis</i>. Furthermore, the role of malondialdehyde (MDA), glutathione (GSH), and phytochelatin (PC) in the detoxification mechanisms used by the hyperaccumulator <i>C. communis</i> to cope with heavy metals were investigated. Results showed that Cu and Cd contents of both leaves and roots in the hyperaccumulator were higher than those in the nonaccumulator. However, the hyperaccumulator variety could have a more powerful ability to transport Cu and Cd from roots to shoots, thus decreasing the toxicity risk. Meanwhile, the MDA, GSH, and PC contents in the hyperaccumulator were significantly lower than those in the nonaccumulator under Cu and Cd stress, indicating that the former can utilize these sulfhydryl compounds to reduce toxicity caused by metal ions. Thus, the hyperaccumulator can tolerate heavy metal-induced toxicity better than the nonaccumulator.</p>
T30006	<p>Synthesis and Properties of Fe<sub>3</sub>O<sub>4</sub> Nanoparticles by Co-precipitation Method to Removal Procion Dye</p> <p><b>Poedji Loekitowati Hariani</b>, Muhammad Faizal, Ridwan, Marsi, Dedi Setiabudidaya</p> <p><i>Abstract</i>—Fe<sub>3</sub>O<sub>4</sub> (magnetite) nanoparticles were synthesized by chemical co-precipitation method. The structure, morphology and magnetic properties of as-prepared were characterized by X Ray Diffraction (XRD), Scanning Electron Microscope-Energy Dispersive X Ray Spectrometry (SEM-EDS), Transmission Electron Microscope (TEM) and Vibrating Sample Magnetometer (VSM). The result of XRD characterization was indicated Fe<sub>3</sub>O<sub>4</sub> as the product. SEM and TEM image of the Fe<sub>3</sub>O<sub>4</sub> showed nanoparticles Fe<sub>3</sub>O<sub>4</sub> have the mean diameter 5-20 nm. The EDS spectra showed strong peaks of Fe and O. Magnetic characteristic of Fe<sub>3</sub>O<sub>4</sub> nanoparticles was indicated super paramagnetic properties. The saturation magnetic was 89.46 emu g<sup>-1</sup>. Therefore, the nanoparticles Fe<sub>3</sub>O<sub>4</sub> is suitable to remove dye in the water by a simple magnetic separation process. The optimum adsorption occurred at initial concentration of procion dye 100 mg L<sup>-1</sup>, pH solution 6,</p>

	dosage of $\text{Fe}_3\text{O}_4$ $0.8 \text{ g L}^{-1}$ and contact time 30 minutes under room temperature with color removal 24.40 % and adsorption capacity was $30.503 \text{ mg g}^{-1}$ .
T30007	<p>Identification of contamination sources and TDS concentration in groundwater of second biggest city of Pakistan</p> <p><b>Akhtar, M. M.</b> and Tang, Zhonghua</p> <p><i>Abstract</i>—The importance of fresh water for human health has no doubt, even for other uses its quality must be contain standard composition. In developing countries groundwater contamination come from various sources which contains very complicated toxics elements such as landfills, waste water drains, river, industrial and agriculture sectors. Due to lack of management resources, policies and enforcement of environmental laws properly are making groundwater system unsuitable for general public. Lahore, second largest city of Pakistan has been facing similar issues. Current study is to investigate present groundwater contamination sources and describes TDS concentration in various parts of study area. Landfill leachate, drain water, River water and groundwater chemical analysis data is used to indentify TDS potential level in groundwater system. 36% groundwater samples have high concentration level then Pakistan Quality Control Authority (PSQCA), while 1.5% is exceeded from WHO standards for drinking water. TDS higher level is alarming for consumers and with time its potential will be higher. According to 2010 groundwater chemical analysis data most areas have suitable zones for drinking purpose; however, there is high risk of continuous contamination. Finally, this study identifies highly contaminated groundwater and makes convenient to find out actual pollutants. Therefore, practical strategies are needed to protect aquifer.</p>
T30008	<p>Influence of Nozzle Pressure on Performance and Emission in Compression Ignition Engine Running on Distilled Waste Plastic Oil (DWPO)</p> <p><b>Chumsunti Santaweesuk</b> and Adun Janyalertadun</p> <p><i>Abstract</i>—This paper presents the physical characteristics of distilled waste plastic oil (DWPO) with diesel fuel. And experiment in influence of nozzle pressure on performance and emission in compression ignition engine running on distilled waste plastic oil (DWPO). The performance test of compression ignition engine running with these oils also has been tested. The physical characteristics are Gross calorific value (MJ/kg), Kinematic viscosity, cst @ <math>40 \text{ }^\circ\text{C}</math>, Specific Gravity@<math>15.6 \text{ }^\circ\text{C}</math>, Cetane index, Flash point, <math>^\circ\text{C}</math> Distillation temperature, <math>^\circ\text{C}</math> @ 90% and distillation test. The performance, using Four-stroke, CI, direct injection, single cylinder 709 C.C., at standard nozzle pressure and setting nozzle pressure at 170,190 and 210 bar has been tested with in brake thermal efficiency, brake specific fuel consumption and exhaust gas emissions. The results show that physical characteristics of distilled waste plastic oil (DWPO) similar to diesel oil. Furthermore the performance of the engine, which is run by that nozzle pressure and oil are in good condition. When the experiment in influence of nozzle pressure on performance and emission in compression ignition engine running on distilled waste plastic oil (DWPO) be similar to commercial diesel.</p>

April 22, 2013 19:00	Dinner and Closing Ceremony
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# Conference Venue

## Jinma Hotel Beijing

(<http://www.jmdjd.com/>)

地址:北京市海淀区学清路甲 38 号金码大酒店

Add: Jinma Hotel, No.38 A, Xueqing Road, Haidian District, Beijing, P.R. China.

Tel: +86-10-62328899

**For participants who are not from China, please print out the following information to arrive the Hotel by Taxi**

请送我到北京市海淀区学清路甲 38 号金码大酒店



**Room reservations recommend:**

**北京梦溪宾馆 (Beijing Mengxi Hotel)**

**Tel:+86-10-59933199**

地址: 北京海淀区学院路 20 号(金码大酒店附近)

**Add: Mengxi Hotel, No.20, Xueyuan Road, Haidian District, Beijing, P.R. China. (Close to Jinma Hotel Beijing)**

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The 2013 4th International Conference on Chemistry and Chemical Engineering (ICCE 2013) is the premier forum for the presentation of technological advances and research results in the fields of Chemistry and Chemical Engineering.

All papers of ICCE 2013 will be published in the IJCEA ( ISSN: 2010-0221) as one volume, and will be included in Engineering & Technology Library, EBSCO, Ulrich's Periodicals Directory, BE Data, Google Scholar, Cross ref, ProQuest and sent to be reviewed by Ei Compendex and ISI Proceedings

## Important Date

Paper Submission (Full Paper)	Before May 1, 2013
Notification of Acceptance	On May 20, 2013
Authors' Registration	Before June 5, 2013
Final Paper Submission	Before June 5, 2013
ICCE 2013 Conference Dates	July 6-7, 2013

## SUBMISSION METHODS:

Conference Template ([DOC](#))

Conference Website: [www.icce.org](http://www.icce.org)

1. [Electronic Submission System](#); (.pdf)

If you can't login the submission system, please try to submit through method 2.

2. Email: [icce@cbees.org](mailto:icce@cbees.org) (.pdf and .doc)





## Call for Papers

The 2013 3rd International Conference on Environmental and Agriculture Engineering (ICEAE 2013) is the premier forum for the presentation of technological advances and research results in the fields of Environmental and Agriculture Engineering.

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## Important Date

### Paper Submission (Full Paper)

Notification of Acceptance

Authors' Registration

Final Paper Submission

ICEAE 2013 Conference Dates

Before May 1, 2013

On May 20, 2013

Before June 6, 2013

Before June 6, 2013

July 6-7, 2013

## SUBMISSION METHODS:

Conference Template ([DOC](#))

Conference Website: [www.iceae.org](http://www.iceae.org)

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## Call for Papers

The 2013 2nd International Conference on Geological and Environmental Sciences (ICGES 2013) is the premier forum for the presentation of technological advances and research results in the fields of Geological and Environmental Sciences.

**All papers of ICGES 2013 will be published in the Volume of Journal ( IPCBEE, ISSN: 2010-4618), and all papers will be included in the Engineering & Technology Digital Library, and indexed by Ei Geobase (Elsevier), Ulrich's Periodicals Directory, EBSCO, CNKI, WorldCat, Google Scholar, Cross ref and sent to be reviewed by Compendex and ISI Proceedings.**

## Important Date

### Paper Submission (Full Paper)

Notification of Acceptance

Authors' Registration

Final Paper Submission

ICGES 2013 Conference Dates

**Before April 30, 2013**

On May 15, 2013

Before May 30, 2013

Before May 30, 2013

July 6-7, 2013

## SUBMISSION METHODS:

Conference Template ([DOC](#))

Conference Website: [www.icges.org](http://www.icges.org)

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## Call for Papers

The 2013 3rd International Conference on Asia Agriculture and Animal (ICAAA 2013) is the premier forum for the presentation of technological advances and research results in the fields of Asia Agriculture and Animal.

All papers of ICAAA 2013 will be published in the APCBEE Procedia (Journal under Elsevier, ISSN: 2212-6708), and will be included in ScienceDirect and sent to be reviewed by Scopus, Ei Compendex and ISI Proceedings.

## Important Date

### Paper Submission (Full Paper)

Notification of Acceptance

Authors' Registration

Final Paper Submission

ICAAA 2013 Conference Dates

Before May 15, 2013

On June 5, 2013

Before June 20, 2013

Before June 20, 2013

July 27 - 28, 2013

## SUBMISSION METHODS:

Conference Template ([DOC](#))

Conference Website: [www.icaaa.org](http://www.icaaa.org)

1. [Electronic Submission System](#); (.pdf)

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All papers of ICBLS 2013 will be published in the *Journal of Life Sciences and Technologies (JOLST, ISSN: 2301-3672)* as one volume, and will be included in the *Engineering & Technology Digital Library*, and indexed by EBSCO, CrossRef, DOAJ, MELib, Index Copernicus, JournalSeek, Google Scholar, Cross ref and sent to be reviewed by Ei Compendex and ISI Proceedings

## Important Date

<b>Paper Submission (Full Paper)</b>	<b>Before May 20, 2013</b>
Notification of Acceptance	On June 10, 2013
Authors' Registration	Before June 25, 2013
Final Paper Submission	Before June 25, 2013
ICBLS 2013 Conference Dates	July 27 - 28, 2013

## SUBMISSION METHODS:

Conference Template ([DOC](#))

Conference Website: [www.icbils.org](http://www.icbils.org)

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2. Email: [icbils@cbees.org](mailto:icbils@cbees.org) (.pdf and .doc)



## Call for Papers

2013 2nd International Conference on Nutrition and Food Sciences(ICNFS 2013) is the premier forum for the presentation of technological advances and research results in the fields of Nutrition and Food Sciences. ICNFS 2013 will bring together leading engineers and scientists in Nutrition and Food Sciences from around the world.

**All papers of ICNFS 2013 will be published in the Volume of Journal ( IPCBEE, ISSN: 2010-4618), and all papers will be included in the Engineering & Technology Digital Library, and indexed by Ei Geobase (Elsevier), Ulrich's Periodicals Directory, Ulrich's Periodicals Directory, EBSCO, CNKI, WorldCat, Google Scholar, Cross ref and sent to be reviewed by Compendex and ISI Proceedings.**

## Important Date

### Paper Submission (Full Paper)

Notification of Acceptance

Authors' Registration

Final Paper Submission

ICNFS 2013 Conference Dates

**Before May 20, 2013**

On June 10, 2013

Before June 25, 2013

Before June 25, 2013

July 27-28, 2013

## SUBMISSION METHODS:

Conference Template ([DOC](#))

Conference Website: [www.icnfs.org](http://www.icnfs.org)

1. **[Electronic Submission System](#)**; ( .pdf)

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